WHAT IS CLAIMED IS:

1. An isolated nucleic acid sequence that is expressed by human prostate cancer cells, selected from the group consisting of:

(i) the nucleic acid sequence contained in SEQ ID NOS.: 1 to 173, 175, 177, 179, 181;

(ii) variants thereof, wherein such variants have a nucleic acid sequence that is at least 70% identical to the sequence of (i) when aligned without allowing for gaps; and

(iii) fragments of (i) or (ii) having a size of at least 20 nucleotides in length.

2. The nucleic acid sequence of Claim 1 which comprises the nucleic acid sequence contained in any one of SEQ ID NOS.: 1 to 173, 175, 177, 179, 181 or a fragment thereof.

3. A primer mixture that comprises primers that result in the specific amplification of one of the nucleic acid sequences of Claim 1.

4. A method of detecting prostate cancer comprising determining whether a human prostate cell sample expresses a target nucleic acid molecule, wherein said target nucleic acid molecule comprises the sequence of a gene or RNA comprising a nucleic acid sequence selected from the group consisting of SEQ ID NOS.: 1 to 173, 175, 177, 179, 181 or of a fragment of said gene or RNA having a size of at least 20 nucleotides in length.

5. The method of Claim 4, wherein said method comprises detecting the expression of said target nucleic acid molecule using a nucleic acid sequence that specifically hybridizes thereto.

6. The method of Claim 5, wherein said method comprises detecting the expression of said target nucleic acid molecule using primers that result in the amplification thereof.

7. The method of Claim 5, wherein the expression of said target nucleic acid molecule is detected by assaying for the antigen encoded by said nucleic acid.

8. The method of Claim 7, wherein said assay involves the use of a monoclonal antibody or fragment that specifically binds to said antigen.

9. The method of Claim 8, wherein said assay comprises an ELISA or competitive binding assay.

10. An antigen expressed by human prostate cancer cells, wherein said antigen is selected from the group consisting of:

(i) the antigen encoded by a nucleic acid sequence having at least 90% sequence identity in SEQ ID NOS.: 1 to 173, 175, 177, 179, 181;

(ii) an antigen derived from a protein comprising a sequences having at least 90% identity in SEQ ID NOS. 174, 176, 178, 180, 182-185; and

(iii) an antigenic fragment of (i) or (ii).

11. A prostate antigen comprising (i) the amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NOs.: 1 to 173, 175, 177, 179, 181or (ii) an amino acid sequence selected from SEQ ID NOS. : 174, 176, 178, 180, and 182-185, or (iii)an antigenic fragment of (i) or (ii).

12. A monoclonal antibody or antigen-binding fragment thereof that specifically binds to a target polypeptide molecule selected from:

(i) a polypeptide encoded by a nucleic acid molecule comprising the sequence of a gene or RNA comprising a sequence selected from the group consisting of SEQ ID NOS.: 1 to 173, 175, 177, 179, 181, or by a fragment of said gene or RNA having a size of at least 20 nucleotides in length, or a polypeptide derived from SEQ ID NOS. :174, 176, 178, 180, and 182 - 185

(ii) an antigen according to Claim 10 or 11, and

(iii) an antigenic fragment of (i) or (ii).

13. A monoclonal antibody or fragment thereof that specifically binds the antigen of Claim 11.

14. The antigen of Claim 10 or 11 which is attached directly or indirectly to a detectable label.

15. The antibody of Claim 12 or 13 which is attached directly or indirectly to a detectable label.

16. A diagnostic kit for detection of prostate cancer which comprises a DNA according to Claim 1 and a detectable label.

17. A diagnostic kit for detection of prostate cancer which comprises primers according to Claim 3 and a diagnostically acceptable carrier.

18. A diagnostic kit for detection of prostate cancer which comprises a monoclonal antibody according to Claim 12 or 13 and a detectable label.

19. A method for treating prostate cancer, which comprises administering to a subject a therapeutically effective amount of a ligand which specifically binds a target molecule selected from (i) a gene or RNA comprising a sequence selected from the group consisting of SEQ ID NOS.: 1 to 173, 175, 177, 179, 181, a variant thereof or a fragment of said gene or RNA having a size of at least 20 nucleotides in length, and (ii) a protein or polypeptide encoded by a gene or RNA comprising a sequence selected from the group consisting of SEQ ID NOS.: 1 to 173, 175, 177, 179, 181, a variant thereof or a fragment of said gene or RNA having a size of at least 20 nucleotides in length, or a polypeptide derived from SEQ ID NOS. :174, 176, 178, 180, and 182 - 185.

20. The method of claim 19, wherein the ligand is a ribozyme or antisense

oligonucleotide that inhibits the expression of a gene having a DNA sequence selected from the group consisting of SEQ ID NOS.: 1 to 173, 175, 177, 179, 181or a fragment, or variant thereof, or a polypeptide derived from SEQ ID NOS. :174, 176, 178, 180, and 182 - 185.

21. The method of claim 19 or 20, wherein the ligand is directly or indirectly attached to an effector moiety.

22. The method of Claim 21, wherein said effector moiety is a therapeutic radiolabel, enzyme, cytotoxin, growth factor, or drug.

23. A method for treating prostate cancer comprising administering to a subject a therapeutically effective amount of an antigen according to Claim 10 or 11, and optionally an adjuvant that elicits a humoral or cytotoxic T-lymphocyte response to said antigen.

24. A method for treating prostate cancer comprising administering to a subject a therapeutically effective amount of a ligand which specifically binds to a protein encoded by a gene or RNA comprising a sequence selected from the group consisting of SEQ ID NOS.: 1 to 173, 175, 177, 179, 181or a fragment, or variant thereof, or a polypeptide derived from SEQ ID NOS. :174, 176, 178, 180, and 182 - 185 optionally directly or indirectly attached to a therapeutic effector moiety.

25. The method of Claim 24, wherein said effector moiety is a radiolabel, enzyme, cytotoxin, growth factor, or drug.

26. The method of Claim 25 wherein the radiolabel is yttrium.

27. The method of Claim 25 wherein the radiolabel is indium.

28. The method of claim 24 wherein said ligand is a monoclonal antibody or fragment thereof.

29. The method of claim 24 wherein said ligand is a small molecule.

30. The method of claim 24 wherein said ligand is a peptide.

31. The method of claim 24, wherein said ligand binds an extracellular domain of said protein.

32. A molecule, selected from:

(i) a polypeptide comprising the sequence of an extracellular domain of a protein encoded by a gene or RNA comprising a sequence selected from the group consisting of SEQ ID NOS.: 1 to 185; and

(ii) a nucleic acid molecule encoding a polypeptide of (i).

33. The molecule of claim 32, wherein said polypeptide has 8 to 100 amino acids in length.

34. A method for selecting, identifying, screening, characterizing or optimizing biologically active compounds, comprising contacting a candidate compound with a target molecule and determining whether the candidate compound binds said target molecule, wherein said target molecule is selected from (i) a nucleic acid molecule comprising the sequence of a gene or RNA comprising a nucleic acid sequence selected from the group consisting of SEQ ID NOS.: 1 to 173, 175, 177, 179, 181, (ii) a fragment of said gene or RNA having a size of at least 20 nucleotides in length, and (iii) a polypeptide encoded by (i) or (ii) or a polypeptide derived from SEQ ID NOs. :174, 176, 178, 180, and 182 - 185.